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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,760	07/12/2001	Hirochika Matsuoka	35.C15565	9589

			EXAMINER
5514 7590 08/22/2005			THOMPSON, JAMES A

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ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/902,760	MATSUOKA, HIROCHIKA
	Examiner	Art Unit	
	James A. Thompson	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 27 May 2005 have been fully considered but they are not persuasive.

Since claims 1-11, which are all the claims at issue in the previous office action, dated 17 February 2005, have been cancelled, all of the rejections under 35 USC §112, 2nd paragraph, 35 USC §102(b), and 35 USC §103(a) are withdrawn.

Claims 12-17, which are the present claims, have been rejected based on prior art. The new claims have necessitated the new grounds of rejection given below.

Applicant's characterization of Ng (US Patent 5,185,661) is merely Applicant's personal synopsis of certain aspects of Ng and is not a comprehensive analysis of the reference. The limitations of claim 12 have been taught by Ng, as demonstrated in the prior art rejections given below.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 12, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ng (US Patent 5,185,661).

Regarding claims 12, 16 and 17: Ng discloses an image processing apparatus comprising a first sample point setting unit (figure 9A(18) and column 4, lines 37-42 of Ng) adapted to

set first sample points in the first color gamut (figure 4 and column 5, lines 10-19 of Ng); an obtaining unit (figure 9A(20) and column 4, lines 69 to column 5, line 3 of Ng) adapted to obtain second sample points by mapping the first sample points to the second color gamut (figure 6 and column 6, lines 12-21 of Ng); a gradation line setting unit (figure 9A(22) and column 5, lines 19-24 of Ng) adapted to set a gradation line (figure 7b (58) of Ng) by using the plural first sample points (L^*_{in}) (column 7, lines 25-30 of Ng); a gradation line mapping unit (figure 9B(32) and column 6, lines 42-48 of Ng) adapted to map the gradation line by using the second sample points (L^*_{out}) corresponding respectively to the plural first sample points (figure 7b and column 7, lines 36-43 of Ng); and an input color mapping unit (figure 9B(34) and column 6, lines 64-68 of Ng) adapted to map an input color to the second color gamut by using the mapped gradation line (column 7, lines 52-62 of Ng).

Further regarding claim 12: The apparatus of claim 16 performs the method of claim 12.

Further regarding claim 17: The apparatus of claim 16 performs the steps of the computer program of claim 17.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 13 is rejected under 35 U.S.C. 103(a) as being
unpatentable over Ng (US Patent 5,185,661) in view of Tuijn (US
Patent 6,058,207).

Regarding claim 13: Ng does not disclose expressly that
the curve is obtained by using at least one of a B-spline curve,
a rational B-spline curve, a Bezier curve, and a one- or more-
dimensional spline curve.

Tuijn discloses performing color modification in a color
gamut (column 6, lines 58-67 of Tuijn) by obtaining a curve
using at least one of a B-spline curve, a rational B-spline
curve, a Bezier curve, and a one- or more-dimensional spline
curve (column 12, lines 42-49 and column 13, lines 7-10 of
Tuijn).

Ng and Tuijn are combinable because they are from the same
field of endeavor, namely color gamut correction and
modification for digital color processing systems. At the time
of the invention, it would have been obvious to a person of
ordinary skill in the art to use a spline function or a Bezier
function, as taught by Tuijn, to obtain the curve taught by Ng.
The motivation for doing so would have been that appropriate
weight values are required to better transform color space
values (column 5, lines 32-38 of Tuijn), such as in the case of
the spline (column 12, line 47-52 of Tuijn) and Bezier curves
(column 13, lines 7-10 of Tuijn). Therefore, it would have been
obvious to combine Tuijn with Ng to obtain the invention as
specified in claim 13.

6.   Claims 14-15 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Ng (US Patent 5,185,661) in view of Berns
(*Principles of Color Technology*, by Roy S. Berns, third edition,
pp. 20-23 and pp. 151-164).

Regarding claim 14: Ng discloses that the first sample
points are located in L*a*b* space (figure 6 and column 4, lines
37-42 of Ng).

Ng does not disclose expressly that the first sample points
are located on six faces of an R (red) face, a G (green) face, a
B (blue) face, a C (cyan) face, a M (magenta) face, and a Y
(yellow) face in the first color gamut.

Berns discloses sampling color points which are located on
six faces of an R (red) face, a G (green) face, a B (blue) face,
a C (cyan) face, a M (magenta) face, and a Y (yellow) face in a
color gamut (page 153 figure; page 154 figure; and page 155,
left column, last paragraph of Berns).

Ng and Berns are combinable because they are from the same
field of endeavor, namely color image data processing. At the
time of the invention, it would have been obvious to a person of
ordinary skill in the art to use the RGB additive - CMY
subtractive color space taught by Berns instead of the L*a*b*
color space taught by Ng. The motivation for doing so would
have been that RGB primary colors are the primary colors
directly used for CRT displays, and CMY primary colors are the
primary colors directly used for paints and printer inks (page
155, left column, last paragraph of Berns). Therefore, it would
have been obvious to combine Berns with Ng to obtain the
invention as specified in claim 14.

Regarding claim 15: Ng discloses that the mapping of the
sample points to the second color gamut includes mapping in an

L*a*b* color space according to the first color gamut and the
second color gamut (figure 6 and column 4, lines 37-42 of Ng).

Ng does not disclose expressly that said mapping of the
sample points to the second color gamut includes two-dimensional
mapping on a lightness-chroma plane, and adjustment of the hue
component.

Berns discloses mapping sample points to a second color
gamut including two-dimensional mapping on a lightness-chroma
plane (page 21, right column, last full paragraph and last two
lines to page 22, left column, first two non-figure text lines;
and page 21, right column, figure("Achromatic pebbles") and
figure("Chromatic pebbles") of Berns), and adjustment of the hue
component (page 22, left column, both figures; and page 22,
right column, first paragraph under "Color Coordinates"
heading).

Ng and Berns are combinable because they are from the same
field of endeavor, namely color image data processing. At the
time of the invention, it would have been obvious to a person of
ordinary skill in the art to map the sample points onto a second
color gamut, wherein said second color is a lightness-chroma-hue
color gamut, and adjusting the hue, as taught by Berns. The
suggestion for doing so would have been that colors can be
conveniently quantified according to their lightness, chroma and
hue (page 22, "Hue", "Lightness" and "Chroma" bullet points of
Berns). Therefore, it would have been obvious to combine Berns
with Ng to obtain the invention as specified in claim 15.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of
rejection presented in this Office action. Accordingly, **THIS
ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is
reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action
is set to expire THREE MONTHS from the mailing date of this
action. In the event a first reply is filed within TWO MONTHS
of the mailing date of this final action and the advisory action
is not mailed until after the end of the THREE-MONTH shortened
statutory period, then the shortened statutory period will
expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated
from the mailing date of the advisory action. In no event,
however, will the statutory period for reply expire later than
SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to James A.
Thompson whose telephone number is 571-272-7441. The examiner
can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, David K. Moore can be
reached on 571-272-7437. The fax phone number for the
organization where this application or proceeding is assigned is
571-273-8300.

Information regarding the status of an application may be
obtained from the Patent Application Information Retrieval
(PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status
information for unpublished applications is available through
Private PAIR only. For more information about the PAIR system,
see http://pair-direct.uspto.gov. Should you have questions on
access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

JAT
10 August 2005

THomAs D.
LEE
PRIMARY EXAMINER